

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In re Patent Application of	Confirmation No.: 4959
Ryu YOKOYAMA	Date: March 19, 2008
Serial No.: 10/633,927	Group Art Unit: 3633
Filed: August 4, 2003	Examiner: Ari M. DIACOU
For: OPTICAL TRANSMISSION SYSTEM AND OPTICAL AMPLIFICATION METHOD USING IN THE SYSTEM	

VIA EFS-WEB

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

**RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF
PURSUANT TO 37 C.F.R. §41.37**

Sir:

In response to the Notification of Non-Compliant Appeal Brief of February 20, 2008 enclosed herewith are amended and corrected pages 5 and 6 of the originally filed Brief.

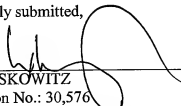
The Patent Appeal Center Specialist who issued the Notification was contacted by telephone to ensure that a proper correction was being effected. Her assistance is appreciated.

The Grounds for Rejection section has been conformed to a concise statement with the additional material moved to the Arguments section. Since there is only one ground for rejection, with both rejections being handled together, it was agreed that all arguments match the Grounds section and no further changes were required.

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ON MARCH 19, 2008

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Respectfully submitted,


MAX MOSKOWITZ
Registration No.: 30,576
OSTROLENK, FABER, GERB & SOFFEN, LLP
1180 Avenue of the Americas
New York, New York 10036-8403
Telephone: (212) 382-0700

detecting a deteriorated state of said signal light in said optical transmission line at said first wavelength, and/or said second wavelength; and

restoring said deteriorated signal light to an un-deteriorated state by operating said first or second spare pumping light sources,

said first and second spare pumping light sources being operated only when required to restore deteriorated signal light at their respective operating wavelengths (page 12, lines 7-10 and with reference to Figure 1 and reference characters 11 and 12 of spare pumping light sources), a total number of said first light sources for Raman amplification and a total number of said second light sources for Raman amplification being determined by a permissible failure rate of the optical transmission system (this is calculated as described at page 15, line 7-page 16, line 16 and with reference to the graph of Figure 4 and description at page 16, line 19-26) .

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 11-13 and 15 were rejected by the Examiner as being unpatentable under 35 USC 103(a) on the basis of the combined teachings of Namiki et al (PGPub No. 2001/0050802) in view of Zarris et al (PGPub No. 2002/0085268) and claim 16 was rejected by the Examiner as being unpatentable under 35 USC 103(a) on the basis of the combined teachings of Namiki et al (PGPub No. 2001/0050802) in view of Zarris et al (PGPub No. 2002/0085268) and further in view of Grubb et al (PGPub No. 2002/0067539).

ARGUMENTS

In support of the above rejections, the Examiner has cited the Namiki et al reference as teaching an optical amplification method in an optical transmission system with a plurality of first light sources for Raman amplification and adjoining plurality of second light sources for Raman amplification with essentially the steps of (with the Examiner citing reference paragraphs in the Namiki et al. disclosure as showing the enumerated step):

- 1) amplifying the signal light with the first and second light sources for Raman amplification [Figure 23],
- 2) transmitting the amplified signal light through a transmission line [Figure 23],
- 3) detecting a deteriorated state of first and second light sources [Par. 0169]
- 4) restoring signal light by emitting spare pumping light from the spare pumping light sources [0168]

5) the spare pumping light sources are operated only when required to restore deteriorated signal light [0169].

The Zarris reference was cited as teaching that:

- 1) the spare pumping light sources are provided only with the second light sources [007]
- 2) the number of spare pumping light sources are less than the number of first light sources [0007]
- 3) the number of first light sources not having spare pumping light sources intervening between two of the second light sources spare pumping light sources are determined by permissible failure rate of the optical transmission system [007].

The Examiner concluded that it would have been obvious to one skilled in the art to add m spare pumps to the n pump array in the Namiki device and have $(n-m)/m$ pumps between each spare and $m < n$, for the advantage of cost and simplification.

With respect to claim 16, the Examiner noted that claim 16 differed from claim 11 only in that claim 16 does not require that all pumps appear in the same amplifier mode and Namiki and Zarris do not disclose pumping from a plurality of amplifier modes. Accordingly the Examiner cited Grubb as teaching that the pumping can be spread over a number of amplifiers in the system [0019] and that this would have been effected by one skilled in the art for the advantage of reduced cost.

Independent claims 11 and 16 specifically relate to an optical amplification method for an optical transmission system having a plurality of first light sources **and** a plurality of second light sources. Figure 1 of the present application is exemplary of this system configuration (with first and second light sources 11 and 1n):

F I G. 1

